

WHAT IS CLAIMED IS:

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1. A disk cartridge <sup>6</sup> comprising:  
an optical disk <sup>7</sup> for recording/reproducing information, and  
a cartridge case rotatably accommodating the optical disk and  
being provided with a notch <sup>(27, 35)</sup> on a side face thereof,

wherein the notch allows an arm of a disk driving device to  
"approach" the optical disk when the disk cartridge is inserted in the disk  
driving device for recording/reproducing information through a head  
supported by the arm..

2. A disk cartridge according to claim 1, wherein the optical disk  
has a center hub at the center thereof, and the cartridge case has a  
counterbore formed in a recess form on an inside wall on a side  
opposite to a side where a drive shaft for rotating the optical disk is  
inserted, the counterbore facing the center hub.

3. A disk cartridge according to claim 1, wherein the cartridge case  
has a thickness less than 5 mm and an area smaller than 65 mm  
square, and the optical disk has a diameter less than 64 mm and a  
thickness less than 0.8 mm and forms a track having a pitch less than  
0.6  $\mu\text{m}$  so that the optical disk allows information of 650 MB or more to  
be recorded thereon.

4. A disk cartridge comprising:  
an optical disk for recording/reproducing information, and  
a cartridge case rotatably accommodating the optical disk,  
wherein the cartridge case has a recess or protrusion on an inner

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5 wall of the cartridge case facing the optical disk and the optical disk is provided with a protrusion or recess corresponding to the recess or protrusion of the cartridge case so that the degree of freedom in a radial direction of the optical disk is defined by the corresponding recess and protrusion.

5. A disk cartridge according to claim 4, wherein either the recess or protrusion formed on the inner wall of the cartridge case or the optical disk is tapered at its circumference.

6. A disk cartridge according to claim 4 or 5, wherein the protrusion or recess of the optical disk is formed in a center hub having a center hole to be fitted on a shaft for rotating the optical disk.

7. A disk cartridge comprising:

an optical disk for recording/reproducing information,

and

an cartridge case rotatably accommodating the optical disk,

wherein the cartridge case includes an upper case and a lower

case having an upper opening and a lower opening, respectively, for

allowing the head for recording/reproducing information to face the

optical disk and a shutter for opening and closing the upper and lower

openings, the lower case is cut to form the lower opening from a bottom

face to a side face, and the shutter shields the upper opening along a

plane defined by an upper face of the upper case and shields the lower

opening along two planes defined by the bottom face and the side face of the lower case.

8. A disk cartridge according to claim 7, wherein the shutter

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includes an upper shutter portion and a lower shutter portion for shielding the upper and lower openings, a perpendicular portion jointing the upper and lower shutter portions, a pawl for preventing the shutter from coming off and a guide portion extending from the perpendicular portion for slidably guiding the shutter, and the upper case is sandwiched between the guide portion and the upper shutter portion.

9. A disk cartridge according to claim 7, wherein the upper case has a guide groove for slidably guiding the shutter.

10. A disk cartridge according to claim 9, wherein the shutter is provided with a pawl and the cartridge case is provided with a guide groove, for allowing sliding movements and preventing the shutter from coming off at the time of opening and closing the shutter, in an upper case side of an elongated space formed between the upper and lower cases.

11. A disk cartridge according to claim 10, wherein the lower case is positioned on a side of a recording face of the optical disk, and the shutter includes an upper shutter portion and a lower shutter portion for shielding the upper and lower openings of the upper and lower cases, respectively, and a guide portion for guiding the movement of the shutter, so that the upper case is sandwiched between the upper shutter portion and the guide portion.

12. A disk cartridge according to claim 11, wherein the shutter includes a pawl for preventing the shutter from coming off and the position of the shutter is restricted in a direction perpendicular to a

moving direction of the shutter by the pawl and a perpendicular portion jointing the upper shutter portion and the lower shutter portion.

13. A disk cartridge comprising:

an optical disk for recording information signals;

5 a cartridge case rotatably accommodating the disk and being provided with a first opening and a second opening on upper and lower face thereof, the openings allowing approach of recording and reproducing means for recording or reproducing the information signals on or from the disk; and

10 a shutter for opening and closing the openings,

wherein the first opening formed on one of the upper and lower faces of the cartridge case has a first opening region located in the vicinity of the center of the disk and a second opening region extending from the first opening region in a radial direction of the disk to the  
15 outside of the disk,

an edge of the second opening region on a side in a shutter closing direction in which the shutter closes is formed toward the shutter closing direction as compared with the first opening region and an edge of the second opening region on a side in a shutter opening  
20 direction in which the shutter opens is formed toward the shutter closing direction as compared with the first opening region,

the shutter has a first shutter section for opening and closing the first opening,

the first shutter section has a first shutter region located in the  
25 vicinity of the center of the disk and a second shutter region extending

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from the first shutter region in the radial direction of the disk to the outside of the disk,

an edge of the second shutter region on a side in the shutter closing direction is formed toward the shutter closing direction as compared with the first shutter region and an edge of the second shutter region in the shutter opening direction is formed toward the shutter closing direction as compared with the first shutter region.

14. A disk cartridge according to claim 13, wherein the outline of an edge of the first shutter section on the side in the shutter closing direction is substantially the same as the outline of an edge of the first opening on a side in the shutter opening direction, at least in a side where the second shutter region is formed rather than the center of the disk in a direction perpendicular to the direction of the movement of the shutter.

15. A disk cartridge comprising:

an optical disk for recording information signals; and

a cartridge case rotatably accommodating the disk,

wherein the cartridge case has an opening on one face thereof, the opening having a first opening region located in the vicinity of the center of the disk and a second opening region extending from the first opening region in a radial direction of the disk to the outside of the disk,

the disk cartridge has a shutter for opening and closing the opening, the shutter having a first shutter region located in the vicinity of the center of the disk and a second shutter region extending from the first shutter region in the radial direction of the disk to the outside of

the disk,

the second opening region is formed toward a direction in which the shutter closes as compared with the first opening region, and

the second shutter region is formed toward the direction in which the shutter closes as compared with the first shutter region.

16. A disk cartridge according to any one of claims 13 to 15, wherein the first opening region is an opening which allows a spindle motor to approach the disk and the second opening region is an opening which allows a pickup to approach the disk.

17. A disk cartridge comprising:

an optical disk for recording information signals; and

a cartridge case rotatably accommodating the disk,

wherein the cartridge case has, on one face thereof, a third opening which is located in the vicinity of the center of the disk and allows a spindle motor to approach the disk and a fourth opening which is formed separately from the third opening, extending in a radial direction of the disk to the outside of the disk, and allows a pickup to approach the disk,

the disk cartridge has a shutter having a first shutter region for opening and closing the third opening and a second shutter region for opening and closing the fourth opening, the first shutter region and the second shutter region being formed in one piece,

the fourth opening is formed toward a direction in which the shutter closes as compared with the third opening, and

the second shutter region is formed toward the direction in which

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the shutter closes as compared with the first shutter region.

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